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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/893,421

06/29/2001

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004770.00722

5222

22907 7590 07/25/2008

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EXAMINER

SALTARELLI, DOMINIC D

ART UNIT

PAPER NUMBER

2623

MAIL DATE

DELIVERY MODE

07/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/893,421	Applicant(s) SALO ET AL.	
	Examiner DOMINIC D. SALTARELLI	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-63,65-89 and 101 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45-63,65-89 and 101 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 45-63, 65-89, and 101 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 45-63, 65-89, and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gotwald (5,987,518, of record) in view of Banker et al. (5,497,187) [Banker] and Nicolas et al. (5,453,797) [Nicolas].

Regarding claims 45, 50, 56, 57, 59, 63, 74, 82, 92, 96, and 101, Gotwald discloses a system for delivering content over a hierarchical network comprising a source of content deliverable, to a network (including wireless networks, as the network is any known communication path, col. 3, lines 25-50), the network including head end equipment operable to place content into one a plurality of selected data streams (col. 4, lines 43-54) in response to requests received via a network gateway (the invention is providing internet access, col. 1, lines 36-67), and a terminal operable to receive the data stream (col. 3, lines 51-65), wherein

the head-end equipment classifies the content and in accordance with the classification places it into the data stream (col. 4 line 55 – col. 5 line 22).

Gotwald fails to disclose the data streams are corresponding hierarchically modulated data streams that are simultaneously transmitted, wherein at least one of the plurality of hierarchically modulated data streams is configured to have a maximum range greater than at least one other hierarchically modulated data stream that provides an adequate C/N ratio for reception by a terminal.

In an analogous art, Banker discloses placing differently prioritized data into different streams which are simultaneously transmitted, such that higher priority data is in a separate data stream and unaffected by lower priority data which has been transmitted in a separate data stream (col. 11, lines 1-17).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Gotwald to include the data streams are corresponding hierarchically modulated data streams that are simultaneously transmitted, as taught by Banker, for the benefit of separating data streams so that lower priority data will not interfere with the transmission of higher priority data.

Gotwald and Banker fail to disclose at least one of the plurality of hierarchically modulated data streams is configured to have a maximum range greater than at least one other hierarchically modulated data stream that provides an adequate C/N ratio for reception by a terminal.

In an analogous art, Nicolas teaches it was quite well known in the art at the time to place differently prioritized data streams on different portions of the frequency spectrum, granting higher priority data a lower C/N ratio such that the higher priority data has a higher maximum range than lower priority data (col. 4, lines 40-61).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Gotwald and Banker to include placing differently prioritized data streams on different portions of the frequency spectrum, granting higher priority data a lower C/N ratio such that the higher priority data has a higher maximum range than lower priority data. Since data that has a higher priority is thus more important or urgent than lower priority data, it is beneficial to use a known broadcasting method which ensures that the higher priority data can be received by a receiver even in circumstances where the lower priority data could not be recovered.

Regarding claim 46, Gotwald, Banker, and Nicolas disclose the apparatus of claim 45, wherein a classification of the content is made in accordance with a data type of the content (Gotwald, col. 5, lines 7-16).

Regarding claim 47, Gotwald, Banker, and Nicolas disclose the apparatus of claim 46, wherein Gotwald teaches the classifier is connectable to a data stream of content in the form of data elements (col. 5 line 57 – col. 6 line 3) and a

splitter is connected to the output of the classifier (as shown in fig. 4, splitting the data onto output FIFOs) wherein the classifier identifies the data type of each element of the data streams and inserts a marker into said data streams indicative of a priority assigned to the element such that the splitter subsequently places each data element, in accordance with the marker, into a corresponding hierarchical transport stream for subsequent transmission by the network (col. 6, lines 4-13).

Regarding claims 48 and 65, Gotwald, Banker, and Nicolas disclose the apparatus of claims 46 and 47, wherein Gotwald teaches a look-up table accessible in use by the classifier, the table comprising a set of profiles, each profile including a definition of a priority for a particular data type wherein a selection by the classifier of the particular profile for identifying the data type of each element is determined by the network (col. 6, lines 4-13).

Regarding claims 49, 51, 52, 58, 62, 66-70, 75, 76, 78, 80, and 81, Gotwald, Banker, and Nicolas disclose the device, method, and system of claims 45, 50, 51-56, 59, and 60, wherein the hierarchically modulated simultaneously transmitted data streams are ranked in accordance with a predetermined criteria (profiles taught by Banker, col. 11, lines 1-17, or quality of service requirements as taught by Nicolas, the priority of the carrier, col. 4, lines 50-61).

Regarding claims 53-55, 60, 77, 83, 88, and 89 Gotwald, Banker, and Nicolas disclose the method of claims 52 and 59, wherein the network determines the selection profile on the basis of an intended recipient of the content, on the basis of a service providing the content, or on the basis of a network load (Gotwald, col. 6, lines 4-14 where priorities are based on source or destination IP address, and col. 6, lines 34-39, wherein priority is adjusted to maintain throughput [consideration of network load]).

Regarding claims 61, 71-73, 79, and 84-87, Gotwald, Banker, and Nicolas disclose the method of claims 51-54, 59, and 62, wherein the request is received in a return channel established by a terminal of a public land mobile network via a public switched telephone network (Gotwald, standard network 20, fig. 1, col. 3, lines 33-39) and the establishment of one of the profiles is based upon the level of service (Gotwald, col. 11, lines 1-11, where some services are given higher priority than others based on importance), wherein the network is a terrestrial digital video broadcast network [DVB-T] (Gotwald, broadband channel 16, fig. 1, col. 3, lines 48-50).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 5,600,672 to Oshima et al. who also teaches it was well known to separate and simultaneously transmit data streams a hierarchy of

different data streams wherein at least one provides an adequate C/N ration for reception by a terminal.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is (571)272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dominic D Saltarelli/
Examiner, Art Unit 2623

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2623